# OR-DVI88SA

## 8 x 8 DVI Matrix with Audio

## OPERATIONS MANUAL

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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

## REVISION HISTORY

| VERSION NO. | DATE | SUMMARY OF CHANGE |
|---|---|---|
| RDV1 | 01/06/2012 | Preliminary Release |
| | | |

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## 1. INTRODUCTION

The OR-DVI88S Matrix Switcher connects eight DVI sources to eight displays allowing any source to be independently displayed on any screen connected to the DVI matrix outputs. This matrix switcher can be controlled via the supplied IR Remote Control, RS-232, or by using the selection buttons on the front of the unit. This device provides Audio functionality, 'Deep Colour' support and 3D signal compatibility (3D supported on HDMI cable using HDMI to DVI adaptor).

## 2. APPLICATIONS

- Video/TV wall display
- Commercial advertising and display
- Lecture room display and control

## 3. PACKAGE CONTENTS

- 8x8 DVI Matrix with Audio
- 24V/6.25A DC adaptor x 1
- Remote control x 1
- IR receiver cable x 1
- Operation manual

## 4. SYSTEM REQUIREMENTS

Input source equipment with DVI connection cables and 3.5mm phone jack cable or other audio equipment.

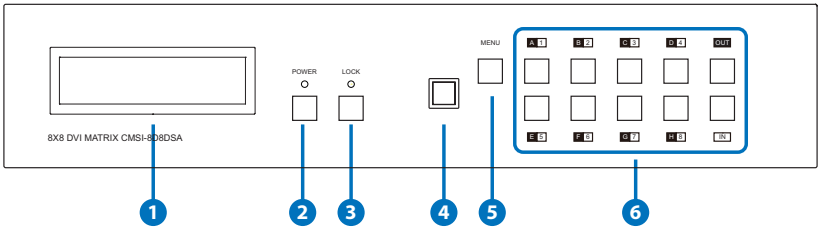
Output DVI display with DVI connection cables.

## 5. FEATURES

- Resolutions supported: PC - VGA to WUXGA; HDTV - 480i to 1080p plus 1080p24fps.
- Supports DVI input up to 15m with 8bit Colour depth or 10m with 12bit Colour depth.
- Input is Compensated, Clock / Phase Adjusted, and Jitter Eliminated
- RS-232 and IR Remote Control, plus IR extender
- Supports Audio
- Supports 'Deep Colour' (10 & 12 bit).
- Selectable EDID settings - TV (downstream) and STD (fixed).
- 2U Rack Mount design
- Supports 3D signals (HDMI to DVI adaptor cable required).
- Key Lock function

# 6. OPERATION CONTROLS AND FUNCTIONS

## 6.1 Front Panel



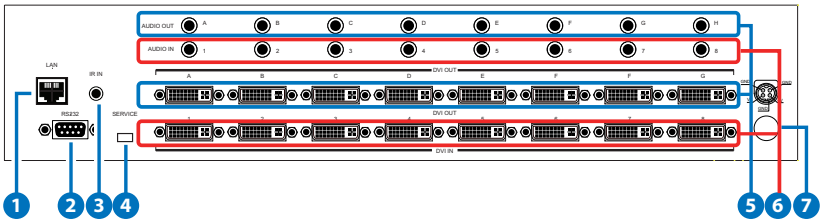

1. **LCM:** This monitor displays your setting information with each input and output selection.
2. **POWER button & LED:** Press this button to turn on the device and the green LED will illuminate when the power is on. When the LED illuminate in red it is in standby mode
3. **LOCK button & LED:** Press this button to lock all the buttons on the panel. To unlock, just press it again.
4. **IR:** This IR window accepts the remote control signal of this device only.
5. **MENU:** Press this button once to select EDID setting from STD (internal) 1 or TV (external) 2 then press it again to confirm the selection. Press this button every to confirm the selection.

   EDID TV: The device will read the EDID of HDMI output A and record it.

   EDID STD: The device's built-in EDID is 1080p@60/12bits for video and LPCM 2CH for Audio.
6. **1 ~8 /A ~ H & Out/In button**

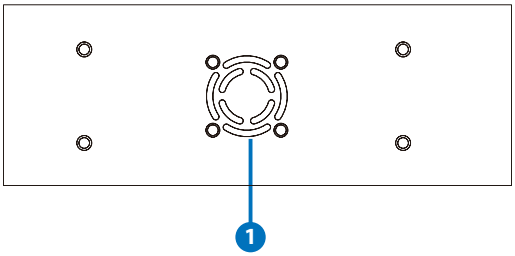
   Press Out/In button first to select the output/input then press the number button to make the selection accordingly. For example, output A ~ D wish to select input 1 and E ~ H wish to select input 2. Press Out→A→B→C→D→In→1→Menu, and then press Out →E→F→G→H→In→2→Menu. If the menu button is not press the selection will not be changed.

## 6.2 Rear Panel




1. **LAN:** Reserved.
2. **RS-232:** This slot is to connect with D-Sub 9pin cable from the PC/NB device for RS-232 control.
3. **IR-IN:** This slot is to connect with the IR extender included in the package for IR signal receiving from the remote control of this device.
4. **SERVICE:** This slot is to connect with USB cable for manufacturers' firmware update only.
5. **DVI OUT A~H with Audio:** These slots are to connect with display or monitor with DVI cables and active speakers with 3.5mm phone jack for output image display and audio simultaneously.
6. **DVI IN 1~8 with Audio:** These slots are to connect with input source equipment such as PC/NB or Graphic card with DVI cable or HDMI to DVI converter cable for input signal sending along with 3.5mm phone jack cable for audio signal input.
7. **DC24V:** This slot is to plug the power cord with adaptor included in the package and then connect them with AC wall outlet for power supply.

## 6.3 Side Panel



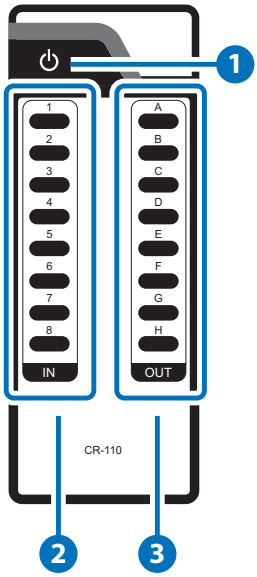

1 **VENTILATOR:** These are fan ventilator area, DO NOT block these area or cover it with any object.

## 6.4 Remote Control

1 **Power:** Press this button to switch on the device or set it to standby mode.

2 **IN:** Input ports selection 1~8.

3 **OUT:** Output ports selection A~H.



## 6.5 RS-232 Protocols

| CMSI-8D8DSA | | | Remote Control Console | |
|---|---|---|---|---|
| PIN | Assignment | | PIN | Assignment |
| 1 | NC | | 1 | NC |
| 2 | Tx | | 2 | Rx |
| 3 | Rx | | 3 | Tx |
| 4 | NC | ▶ ◀ | 4 | NC |
| 5 | GND | | 5 | GND |
| 6 | NC | | 6 | NC |
| 7 | NC | | 7 | NC |
| 8 | NC | | 8 | NC |
| 9 | NC | | 9 | NC |

Baud Rate: 19200bps
Data bit: 8 bits
Parity: None
Flow Control: None
Stop Bit: 1

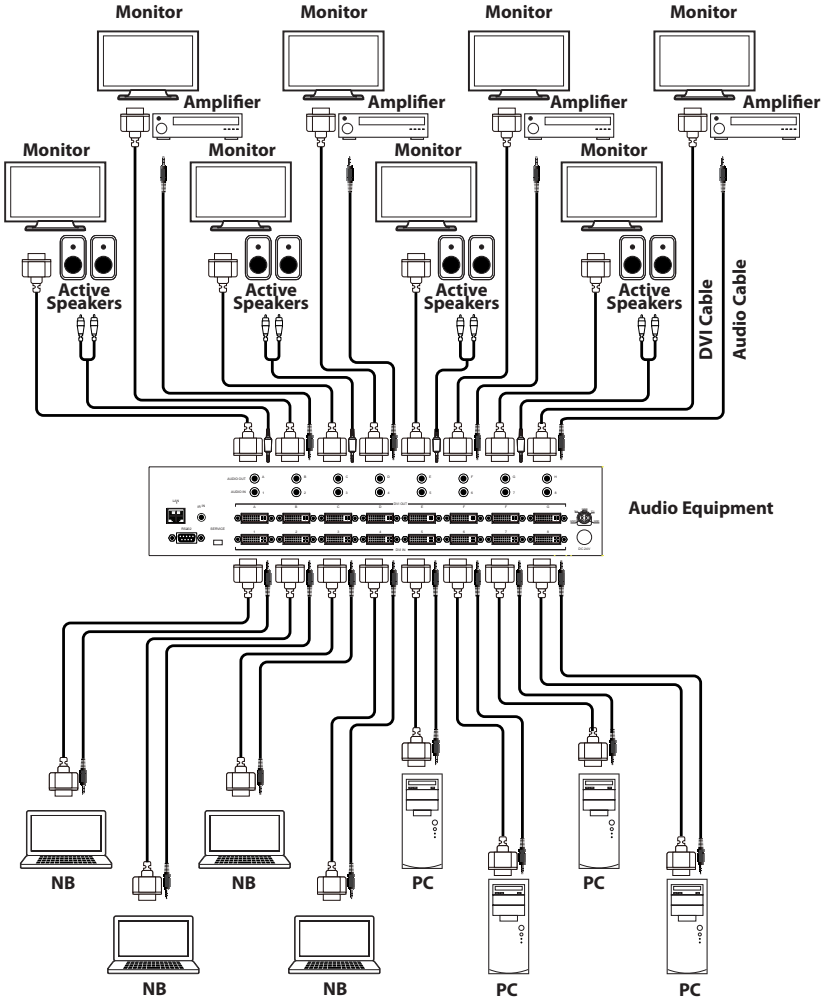
## 6.6 RS-232 Commands

| Command | Description |
|---|---|
| **A1~A8** | Switch output A to 1~8 |
| **B1~B8** | Switch output B to 1~8 |
| **C1~C8** | Switch output C to 1~8 |
| **D1~D8** | Switch output D to 1~8 |
| **E1~E8** | Switch output E to 1~8 |
| **F1~F8** | Switch output F to 1~8 |
| **G1~G8** | Switch output G to 1~8 |
| **H1~H8** | Switch output H to 1~8 |
| **ABCD...1~ABCD...8** | Switch output ABCD... to 1~8 at the same time |
| **P0** | POWER OFF |
| **P1** | POWER ON |
| **I1~I8** | Switch all the output to 1~8 |
| **ST** | Display the current matrix status and F/W version |
| **RS** | System Reset to A1, B2, C3, D4, E5, F6, G7, H8 |
| **?** | Display all available commands |

# 7. SPECIFICATIONS

| | |
|---|---|
| **Video Bandwidth** | 225MHz/6.75 Gbps |
| **Input Ports** | 8 x DVI, 8 x 3.5mm Phone Jack<br>1 x IR,<br>1 x RS-232,<br>1 x mini USB B type<br>(for firmware update only),<br>1 x RJ-45 (LAN) |
| **Output Ports** | 8 x DVI , 8 x 3.5mm Phone Jack |
| **ESD Protection** | Human body model:<br>±8kV (air-gap discharge)<br>±4kV (contact discharge) |
| **Power Supply** | 24V/6.25A DC (US/EU standards, CE/ FCC/UL certified) |
| **Dimensions** | 438mm(W) x 255mm(D) x 93mm(H) |
| **Weight** | 4554g |
| **Chassis Material** | Metal |
| **Silkscreen Color** | Black |
| **Operating Temperature** | 0˚C ~ 40˚C / 32 ˚F ~ 104 ˚F |
| **Storage Temperature** | -20˚C ~ 60˚C / -4 ˚F ~ 140 ˚F |
| **Relative Humidity** | 20 ~ 90% RH (non-condensing) |
| **Power Consumption** | 48W |

# 8. CONNECTION AND INSTALLATION



## 9. ACRONYMS

| ACRONYM | COMPLETE TERM |
|---|---|
| **DTS** | Digital Theater System |
| **DVI** | Digital Visual Interface |
| **EDID** | Extended Display Identification Data |
| **HDCP** | High-bandwidth Digital Content Protection |
| **HDMI** | High-Definition Multimedia Interface |
| **HDTV** | High-Definition Television |
| **LCM** | Liquid Crystal Monitor |
| **USB** | Universal Serial Bus |
| **VGA** | Video Graphics Array |
| **WUXGA** | Wide Ultra Extended Graphics Array |

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